US Army Corps
of Engineers
Detroit District

Special Public Notice

In Reply Refer To: Corps File No. 99-900-010-0

Date: December 12, 2003
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Project Location: These Mitigation Guidelines and Requirements for Applicants are being applied throughout the Detroit District (LRE) of the U.S. Army Corps of Engineers (Corps). The regulatory boundaries of the Detroit District encompass the State of Michigan shoreline and navigable waterways, as well as the northern third of the State of Indiana. Please see the Regulatory Boundaries map on our website: http://www.lre.usace.army.mil/regulatory.

Background Information: As part of the Corps and U.S. Environmental Protection Agency's (EPA) long-term plan to improve compensatory mitigation guidance to permit applicants on a regional watershed basis we are, by posting this Public Notice for comment, providing the Mitigation Guidelines and Requirements for Applicants being utilized in the Detroit District (Guidelines). The Guidelines are intended to clarify provisions within existing authorities and do not establish new requirements. This requirement for posting and providing opportunity for comment is the result of the National Academy of Sciences (NAS) findings and consequential National Mitigation Action Plan. For the complete NAS findings visit the web site: http://www.nap.edu/books/0309074320/html/.
The Corps is committed to improving the success of mitigation in addition to increasing our efforts on mitigation compliance to meet the goal of no net loss of our Nation's aquatic resources, consistent with the Section 404(b)(1) Guidelines. Under these regulations, compensatory mitigation is required to offset aquatic resource losses after all appropriate and practicable steps have been taken to first avoid and then minimize aquatic resource impacts.

These Guidelines are designed to assist the regulated public with all aspects of the mitigation process and to provide information to ensure future compensatory mitigation sites successfully replace all lost functions and values associated with regulated impacts to waters of the U.S. under the Clean Water Act Section 404 and the Rivers and Harbors Act Section 10 programs. The

purpose of the checklists (Appendix C and D) is to identify the types and extent of information that agency personnel need to assess the likelihood of success of a mitigation proposal. The checklist provides a basic framework that will improve predictability and consistency in the development of mitigation plans for permit applicants. Specifically, the one page checklist will go in each permit file where compensatory mitigation is being evaluated. The supplement will be a reference for compensatory mitigation that the Project Manager (PM) would have available for applicants, consultants, contractors, etc. to better inform them of the PM's project requirements.

The Corps of Engineers is soliciting comments from the public, Federal, State and local agencies and officials, Indian Tribes and other interested parties. We will consider the comments and publish the final Mitigation Guidelines by June 1, 2004. Questions and/or comments may be directed to Nancy Peterson at the U.S. Army Corps of Engineers, Regulatory Office, P.O. Box 1027, Detroit, MI 48231-1027. Telephone number is 313-226-7504.

DETROIT DISTRICT
U.S. ARMY CORPS OF ENGINEERS
MITIGATION GUIDELINES AND REQUIREMENTS FOR APPLICANTS

GENERAL POLICY

Compensatory wetland mitigation is the restoration or creation of wetlands to replace wetland functions that would be otherwise lost as a result of an activity permitted by the U.S. Army Corps of Engineers. Although parties applying for Corps permits to discharge material in wetlands/other waters of the United States may use compensatory mitigation to offset such losses, they should understand compensation is considered to be a last resort in the scheme of the Corps' permit evaluation process. Research indicates that restoration is the most likely type of mitigation to result in successful and sustainable aquatic resource replacement.

The 404(b)(1) Guidelines of the Clean Water Act (Guidelines) are the primary criteria the Corps uses to evaluate discharges into waters of the United States, including wetlands. In 1989, the United States Environmental Protection Agency and the Corps jointly established policy and procedures in determining the type and level of compensatory mitigation necessary to demonstrate compliance with the Guidelines. The Guidelines state that no discharge of dredged or fill material shall be permitted if there is a less damaging practicable alternative to the proposed discharge that would have less adverse impact on the aquatic ecosystem. For activities not requiring siting in special aquatic sites (*e.g.,* wetlands), the Guidelines presume that less environmentally damaging practicable alternatives exist. Per the Guidelines and Corps/EPA policy, the applicant and the Corps must first evaluate alternatives to *avoid* impacts; then review appropriate and practicable steps to *minimize* adverse impacts; and only then settle on appropriate and practicable means of *compensating* for the unavoidable impacts that remain.

This guidance only pertains to projects where applicants have already evaluated alternatives and minimization. We cannot fully establish any credit for a compensatory mitigation proposal until we have completely reviewed project alternatives and then reviewed impact minimization. The Guidelines also require us to deny permits when we determine that a project would cause or contribute to significant degradation of the aquatic ecosystem, whether or not there is a less damaging practicable alternative. The Guidelines also recognize that there is no method of providing adequate compensation for impacts to certain ecosystems—we must also deny permits in these situations.

From an applicant's point of view, there are other reasons for considering compensatory mitigation as a last resort. First, restoring or creating wetlands requires acquiring at least as much upland acreage as the wetland acreage an applicant proposes to fill. Such upland areas are usually an obvious alternative site for proposed projects. Secondly, the restoration or creation of ecosystems is, at best, a risky endeavor. The responsibility for design, construction, and success rests solely with the applicant/permittee. When mitigation is required as a condition of a Corps permit, all aspects of the mitigation project should be presented in a single document known as a mitigation plan. The requirements presented in this guidance document are important planning steps that you must take to create a comprehensive mitigation plan and improve the potential for mitigation success. We will review the material that you present and adopt certain aspects as requirements or conditions for mitigation success; however, we will not endorse any particular site, design, or construction measure which you propose, nor provide any guidance beyond agreeing to what we consider appropriate and practicable mitigation. You are ultimately responsible if the effort is somehow not successful and we will not release you of your permit obligations until the mitigation project attains the goals stated in the approved mitigation plan.

FINAL SUBMISSIONS

The final submission of all mitigation and monitoring plans should be in a SINGLE document. It should contain up-to-date versions of all materials *even* if other versions were submitted in the application process. The plan must be site-specific rather than conceptual, and be accompanied by a complete set of plan drawings. The mitigation document for a specific project must include the requirements stated in Sections I through VIII.

MITIGATION REQUIREMENTS

I. GOALS OF MITIGATION

The goals of mitigation must be clearly stated in the mitigation plan. The basic objective of compensatory mitigation is the functional replacement of wetland functions and values that are lost through construction of the permitted project. Not to be overlooked, however, is that the site selected for mitigation currently provides functions that will be lost in the mitigation conversion effort.

Compensatory mitigation is required for unavoidable adverse impacts to the wetland resource. Mitigation cannot simply be used to offset the acreage of wetland losses, but must also address the loss of functions and values. Our regulations and guidance encourage the restoration of former wetland areas (e.g., wetlands that were drained,

diked, filled) at or near the impact site over the creation of wetlands from uplands. Such restoration usually involves the reintroduction of hydrology to the site or removal of fill from the site. Because wetland topography, geology, soils, and vegetative seed bank are typically present on a restoration site, the chances of realizing successful mitigation are much greater with restoration than with creation. Landscape-level wetland functions are already in place on most restoration sites, therefore, when considering restoration options, a broad watershed perspective is important. As such, restoration fits with the goals of the Clean Water Act more so than creation and generally requires a lower replacement ratio.

To adequately compensate for unavoidable adverse impacts, we will generally require mitigation at a ratio, on a unit area basis, greater than 1:1. The mitigation ratio will increase as the uncertainty of success increases and as the distance and type of wetland proposed for mitigation becomes less appropriate in terms of functional replacement. If a proposed project complies with the 404(b)(1) Guidelines and is not contrary to the public interest *and* if the functions and values of the impacted aquatic resource are considered high, the project may be permitted with a substantially increased compensation ratio. It may be appropriate and practicable to replace different functions at more than one location. For example, we may require floodwater detention replacement on site and habitat replacement at an off-site location. Finally, if it is not appropriate or practicable to replace "in-kind" a certain wetland type or suite of functions, we may accept "out-of-kind" restoration or creation of wetlands that have been important for a watershed and/or ecoregion, but which have suffered heavy historical loss since settlement. We must be convinced that such a trade-off would be best for the overall aquatic environment.

II. WETLAND TYPES, FUNCTIONS, AND VALUES

A. Wetland Type

Provide a written narrative describing the existing ecological characteristics of both the wetland impact site and the mitigation site. Provide a similar description for the target wetland community (*e.g.*, palustrine forested wetland, sedge meadow, etc.).

B. Wetland Functions and Values

Describe the *existing* wetland functions and values at the impact site and the functions and values that will result from the mitigation. Examples of wetland functions include: Groundwater recharge/discharge, sediment/toxicant retention, wildlife habitat and diversity, and floodwater storage, etc. Examples of wetland values include recreational use and aesthetic quality.

C. Unique and/or Rare Areas

The functions and values of a wetland determined to be unique and/or rare may be considered irreplaceable under the Section 404(b)(1) Guidelines. Impacts to these areas will typically not be permitted. Examples of these areas include, but are not limited to:

1. lands with unique and/or rare plant communities;
2. streams with natural channels and stream segments of high biological value;
3. areas providing habitat for uncommon animals;
4. dune-swale complexes;
5. bogs; and
6. fens

III. PROPOSED MITIGATION SITE

A. Relevant Factors

1. The most important design factor is attaining and maintaining appropriate hydrological conditions. Applicants should be aware that restoration of former wetlands is much more likely to succeed than wetland creation. A good mitigation design selects an appropriate site and takes into consideration all relevant multi-disciplinary factors that affect self-sustaining ecological systems. A historically impacted site is preferred for mitigation. Relevant factors include, but are not limited to:

a) incorporating existing or planned upland buffers of native plant communities;

b) landscape context of the aquatic resource;

c) presence of soils with suitable texture;

d) use of areas adjacent to existing wetlands;

e) side slopes or other slopes affecting water levels at the site;

f) establishment of corridors linking mitigation areas with existing natural areas; and

g) presence of native, non-invasive species seedbank;

h) long term protection and management agency (e.g. government agency, land conservancy) available; and

i) climate considerations also can impact hydrologic issues, sediment transport factors and other factors affecting attainment of desired functions, therefore applicants need to account for it in mitigation plans, including local and regional variability and extremes.

2. Mitigation efforts may not achieve the performance standards if the landscape design is not integrated with the appropriate site water management. On site mitigation is preferred to satisfy the in-place mitigation goals. A protected hydrological source is essential and should be considered in developing the plans. However, if the site cannot be developed without radical modifications to the landscape and/or does not contain hydrology such that on-site mitigation is likely to succeed, then off-site mitigation is a viable alternative. Under certain circumstances, off-site mitigation may be beneficial to the overall aquatic environment within the watershed. The location for off-site mitigation needs to be carefully selected and is subject to Corps of Engineers' approval. Priority will be given to sites that best protect the aquatic resource, and may include:

   a) land identified for aquatic restoration in a watershed management plan or a greenway corridor plan;

   b) land up-gradient to existing resources of value that need wetland restoration for protection against sedimentation and water quality degradation. This includes land suitable for ecosystem restoration purposes; and

   c) land identified for acquisition, preservation, and restoration by public agencies or other not-for-profit groups committed to its management in perpetuity.

B. Preservation

Generally it should be assumed that preservation is not acceptable mitigation. In very limited circumstances, credit will be given to the enhancement, preservation and/or donation of high quality natural areas as mitigation. Such proposals that do not offer a mix of mitigation techniques, including restoration, are unacceptable. Proposals should include funding for baseline inventories and monitoring, as well as the long-range management of the site. Because a net loss of wetland acreage is implicit in preservation, the ratio of mitigation acres required will be significantly higher than in restoration efforts. The District cautions that enhancement of an area by appropriate management, rather than simple donation, will be required. The donation must be to a land stewardship agency or organization that agrees to manage, as well as preserve, the site in perpetuity.

C. Stormwater

Stormwater retention is a function that may need to be replaced but functions, such as wildlife habitat, are not generally replaced by retention/detention areas. Fluctuations in water levels are too severe and water quality too poor to support acceptable wetland vegetation or provide wildlife habitat. Hence, the use of stormwater areas are rarely acceptable as mitigation by themselves, therefore additional mitigation for other wetland functions will be required.

IV. PROPOSED MITIGATION PLAN

The following is ***required*** for a mitigation plan to be considered complete:

A. Location and Size of Mitigation Area

1. Describe location, including rationale for choice. Indicate distance from project if offsite.

2. Provide the following documentation:

a) Copy of U.S.G.S. quad map with proposed mitigation location outlined and clearly identified in black and white;

b) Site location map showing established roads;

c) Base topographic map with proposed mitigation area(s) outlined and acreage indicated (refer to Appendix A for figure format information);

d) Development plan (where site is located within the development, indicating lots, roads);

e) Construction documents (grading, planting plan, etc.);

f) Soil survey and National Wetlands Inventory (NWI) maps; and

g) Field base map showing fixed reference points.

B. Ownership Status

1. Indicate who presently owns the proposed mitigation site. Availability of property must be clearly defined prior to final review. All easements and/or encroachments located on the proposed mitigation site must be identified. The mitigation site should be owned by the applicant prior to issuance of the Corps permit. The mitigation site should not be constructed on public lands unless the landowner is the responsible party;

2. Indicate expected ownership of the mitigation area following completion of the mitigation project. The responsible party for long-term management and protection of the area must also be identified. A signed management agreement must be submitted if an entity other than the applicant will assume management responsibilities following completion of the mitigation project;

3. Indicate what entity, if any, controls the water flow and the water control structures to and/or from the site. Arrangements must be made by the applicant that guarantees appropriate water flow in the mitigation area during and after the establishment of the mitigation project. The agreement must be in writing and submitted to the Corps for review.

C. Past, Present and Proposed Uses of Mitigation Area

Briefly describe all known past, present and proposed uses of the mitigation area. Discuss non-native landscape plantings, pipelines, power lines, roads, distance and location of nearest structures on property containing mitigation site. Describe the current condition of the proposed mitigation site. The quality of the site will be taken into consideration during the review process. As noted, on-site mitigation is preferred to satisfy the in-place mitigation goals.

D. Jurisdictional Delineation

Describe any jurisdictional areas on the mitigation site. Provide a base topographic map of the site identifying the jurisdictional areas (and any proposed fill). Data forms from the 1987 Corps of Engineers Wetlands Delineation Manual (Technical Report Y-87-1 with electronic updates, see Appendix B) and site plans must accompany the completed delineation report.

E. Past, Present and Proposed Uses of All Adjacent Areas

Briefly describe all known past, present and proposed uses of the properties adjacent to the proposed mitigation site, including potential hydrological changes.

F. Zoning

Give all present and proposed zoning designations for the proposed mitigation site and adjoining properties.

G. Hydrological Regime

1. indicate source(s) of water
2. depict discharge points
3. note areas affected by seasonal flooding
4. depict direction(s) of flow
5. indicate size of watershed (provide map)
6. provide storm hydrograph

Irrigation may be utilized for establishment of a new mitigation area but cannot be used for its permanent hydrological source.

H. Compliance Assurance

An applicant may be required to obtain a performance bond held by an approved surety, a letter of credit or other instrument tied to the attainment of the agreed upon success criteria.

I. Long Term Protection and Management Plan

Describe plan for permanent property protection. Submit a long-term management plan description, if available. All mitigation required by Corps permits is permanent unless otherwise noted in the permit document. The Corps may take enforcement action even after the identified monitoring period has ended.

V. IMPLEMENTATION PLAN

A. Rationale for Expecting Implementation Success

Briefly describe similarities between the approved mitigation plan and any natural wetlands in the surrounding area. Emphasize the existing and proposed hydrophytic vegetation, soils, and target hydrology.

B. Responsible Parties

1. Give name(s), title(s), address(es), and phone numbers of person(s) responsible for implementing the mitigation project, including person(s) responsible for supervising or providing biological monitoring.

2. The property owner must be clearly identified as one of the responsible parties. Written agreements will be required to ensure that the property owner will allow the construction and preservation of the mitigated wetland.

C. Site Preparation

1. Describe plans for the following criteria:

   a) grading

   b) hydrologic changes

   c) water control structures

   d) exotic vegetation control

   e) erosion control

   f) bank stabilization

   g) equipment and procedures to be used

   h) site access control

   i) other

2. Type of soil present (include hue, value and chroma for each soil horizon) and soil series. Indicate whether or not the surface has been scraped off, filled previously, tiled, plowed, etc. Note which soil color chart is utilized (*e.g.*, Munsell or EarthColors) and the publication date of the chart;

3. Identify the original source of any soil transported to the mitigation site. Soil origin is important if the applicant is proposing to use the seed bank from an impacted wetland. Identify which of the following soil horizons is being brought into this site:

   a) "A" horizon which contains roots/seeds

b) "B" horizon, or

c) "C" horizon

4. Provide base topographic maps showing planned site preparation. (Refer to Appendix A for figure format information);

5. Provide representative cross-sections of mitigation site with elevations, north arrow, and scale. Include measurements from a fixed reference point; and

6. The approved mitigation site must be adequately field marked with *permanent* signs identifying the mitigation boundaries.

D. Planting Plan

The planting plan and methods must be described in the proposed mitigation plan. The following information must be incorporated into the planting plan:

1. Provide a table of species to be planted, including numbers, spacing, types of propagules, pot sizes, etc. Scientific and common names must be used, as well as the appropriate indicator status for each species. Use the current regional U.S. Fish and Wildlife Service National List of Plant Species that Occur in Wetlands (Region 3 – North Central).

2. Indicate source-locale of seeds, plant plugs, cuttings, etc. Only native plant species may be used for the mitigation site. Hydrophytic vegetation may not consist of exotic or hybrid nursery species.

3. Show planting locations on a base topographic map according to species. (See Appendix A for figure format information.) The map must include elevations and proposed water levels. Demonstrate that the appropriate plant species are growing in suitable areas.

4. If transplanting is proposed, describe storage method and duration.

5. Describe any expected volunteer native revegetation that is included in mitigation planning.

6. Grass seed mix is commonly used to cover mitigation sites under construction. The species composition of the mix should be clearly documented, as well as any methods for eventually removing the temporary ground cover, if required.

E. Exotic and Undesirable Species Control

1. The plan must identify the methods proposed to prevent the introduction and establishment of invasive species. The following hydrophytic species should be excluded from the mitigated wetland:

   a) *Alliara petiolata* Garlic Mustard
   b) *Aster simplex* Panicled Aster
   c) *Echinochloa crusgalli* Barnyard Grass
   d) *Lythrum salicaria* Purple Loosestrife
   e) *Myriophyllum spicatum* Eurasian Water Milfoil
   f) *Phalaris arundinacea* Reed Canary Grass
   g) *Phragmites australis* Common Reed
   h) *Rhamnus frangula* Glossy Buckthorn

   The list may be modified if the Corps determines that additional species are consistently monopolizing the vegetation of developing wetlands.

2. The plan will identify the methods proposed to eradicate and control invasive species, if required.

F. Schedule

A flowchart is not necessary for constructing a mitigation site. However, time frames should be clearly documented within the proposal, as well as tentative monitoring times. The applicant should be aware that the *initial planting does not constitute the first monitoring period.*

G. Irrigation Plan

1. Describe irrigation method(s) and estimated frequency and amount during dry months. Indicate water source(s) for mitigation area. Sprinklers can only be used temporarily and not as a principal source of hydrology;

2. Show planned irrigation system and/or water flow on base topographic map (may include on planting plan map); and

3. Comply with conditions stated in Section IV - G (Hydrological Regime).

4. Hydrology must be self-sustaining after two consecutive years.

H. As-Built Conditions

The plan must specify that the applicant will:

1. Submit a report, including construction documents, to the Corps within six (6) weeks of completion of site preparation and planting, describing as-built status of the mitigation project. If avoidance is incorporated into the development project design, then describe the as-built status of the development project. Include any deviations from the original plan in the vicinity of, or that will affect, the jurisdictional area. Submit separate reports for grading and planting work if not completed within six weeks of each other. *Initial planting reports are required but will not be considered as a monitoring report.*

2. Provide topographic maps showing as-built contours of the mitigation area. Indicate location of plantings and any other installations or structures. Hydrological tables should also be included illustrating the current and projected water levels for the mitigation site.

VII. MONITORING PLAN

The monitoring plan is subject to Corps approval and is used to determine the responsibilities of the permittee. Monitoring is a basic requirement for all mitigation plans accepted by the Corps. The monitoring plan is used to determine if and when a compensatory mitigation site has achieved the proposed yearly and final success criteria. In addition, monitoring enables the assessment of the mitigation and identifies the need to implement corrective measures. A monitoring plan will include the following:

A. Performance Criteria

1. Yearly target criteria are to be provided by the applicant based on reasonably-paced progress toward final success criteria (Refer to Section VIII – Final Success Criteria); and

2. Corrective measures will be required if the monitoring report indicates that the interim and/or final target criteria are not likely to be achieved.

B. Required Monitoring Methods

1. Description of proposed monitoring methods must be provided. Include monitoring schedule, sample sizes, justification for sampling regimes, and data analyses to be performed;

2. Permanent sampling transects must be established, plotted on project drawings, and identified at the mitigation sites(s). These transects must represent all plant communities within the mitigation areas;

3. The methods will include sampling regimes for vegetation, soil and hydrology within the mitigation areas. In addition, exotic species surveys and planted species survival rates are required;

4. Vegetation monitoring must begin at the established sampling points in the next growing season following the initial planting. At least one inspection must occur per monitoring year for the life of the required monitoring period to document hydrology, vegetation and soils. In addition, for two of the monitoring years, but not during Year 1, hydrology must be documented two times, at least 60 days apart. Only one report per monitoring year is required regardless of the number of inspections.

5. Provide samples of all proposed data sheets;

6. Photos shall be taken during each monitoring period from the same vantage point and in the same direction every year. The photos shall reflect material discussed in the monitoring report. Photographs should be taken of sampling quadrants when percent cover estimates are made of herbaceous vegetation. Include a panoramic overview incorporating the entire site; and

7. In order to ensure comparable assessments, continuity of monitoring methodology must be maintained.

C. Optional Monitoring Methods

Additional parameters may be monitored to adequately assess the developing mitigation site. Examples of such parameters include:

1. Growth rates for herbaceous vegetation, trees and/or shrubs;

2. Wildlife surveys;

3. Amphibian surveys;

4. Macroinvertebrate sampling; and

5. Water quality.

D. Annual Reports

1. Monitoring reports shall assess both the attainment of yearly target criteria and progress toward final success criteria. Reports must be submitted to the Corps no later than December 31. For annual reports received by the Corps between September 1 through December 31, field verification will be accomplished the *following year*. If the monitoring report is submitted early, then it will be verified that growing season. December 31 is the last date to submit the annual report. Copies of all field data sheets may be required to adequately assess the monitoring reports.

2. Recognizing that the summer is a busy time, the Corps will accept a draft monitoring report submitted by August 31 for purposes of meeting the deadline for field verification activities. However, the final report must still be submitted by the December 31 deadline, and the information contained therein should be essentially the same as that in the draft submittal.

3. Annual reports must include the following:

    a) A list of all persons, titles, and companies who prepared the content of the annual report and participated in monitoring activities for that year;

    b) Project description;

    c) Reprint of the approved monitoring plan;

    d) A copy of the Corps permit, Special Conditions, and any subsequent letters of modification, as an appendix;

    e) Results of all quantitative and/or qualitative monitoring concerning site characteristics, functions, and values;

    f) Graphs and/or tables depicting plant community, soil data and water level illustrating the progress of the mitigation relative to the approved success criteria;

    g) Progress in meeting yearly and final success criteria, including proposed actions to remedy any deficiencies;

    h) Digital quality prints or original photographs of all included monitoring photographs;

i) Maps identifying monitoring areas, transects, planting zones, photo location and directions, etc., as appropriate (refer to Appendix A for figure format information);

j) Suggested changes to original monitoring and maintenance, if any, including detailed rationale for the change;

k) Any vegetation data submitted will include scientific name, common name and wetland indicator status. (See National List of Plant Species that Occur in Wetland Region 3 – North Central.) If available, note habitat symbols; and

l) Hydrophytic vegetation development data.

E. Maintenance during monitoring period

Describe planned maintenance activities, including but not limited to:

1. irrigation methods
2. plant replacement
3. weeding
4. invasive species identification and eradication
5. water structure inspection
6. fertilization
7. erosion control
8. herbivore protection
9. trash removal
10. controlled burns
11. and/or any other such activities

F. Wetland Delineation and Survey

A wetland delineation and survey may be required throughout the monitoring period if the site does not appear to be of sufficient acreage.

VIII. FINAL SUCCESS CRITERIA

Final success criteria are proposed by the applicant for Corps approval and are used to determine completion of the permittee's mitigation responsibilities. Fulfillment of these criteria should indicate that the mitigation area is progressing towards the habitat type, functions, and values that constitute the long-term goals of this mitigation.

The mitigation cover types will determine the minimum monitoring period. Emergent or aquatic systems will require monitoring for three to five years. Cover types that include a scrub-shrub component require monitoring no less than five years. Mitigation sites that encompass a forested component require ten years of monitoring. Specifically, the ten years of monitoring require seven years with field visits during years one through four, six, eight and ten. The entire mitigation site must be monitored at each field visit.

For mitigation plantings, final success criteria will not be considered complete until a minimum of two (2) consecutive years after all human support has ceased and the mitigation site has successfully reached the mitigation goals for each of these years. Examples of human support include irrigation, replanting, rodent control, invasive species control, and fertilization.

A. Factors for Final Success Criteria

1. **Percent vegetation cover and/or density**

   The mitigation site must be vegetated at least 70% (areal cover for all stratum) by hydrophytic, native, non-invasive species and no more than 10% of the site may be open water, bare ground or a combination of the two.

2. **Plant species diversity**

   The diversity of the plant community within the mitigation site must be measured. Determine species evenness (relative abundance of individuals among all species present) and species richness (total number of species observed within the mitigation area) for each monitoring period.

Calculate the diversity of the site by a known, accepted diversity index. Although all diversity indices have at least some deficiency, they are still a useful means to evaluate the diversity of a community. The diversity index to be used must be clearly defined and justified in the report. The calculated index score should fall within the accepted range for the diversity index. In addition, the diversity index cannot be lower than that of the impact site for the mitigation area to be deemed successful, presuming the site is in-kind mitigation. Diversity index scores are to be stable or increasing in the two years before final acceptance of the mitigation.

Floristic Quality Assessment (FQA) is recommended for evaluating the plant community structure. This would include two types of measurements for a site. The first measurement is for the entire site, yielding species richness, average conservatism of species and a Floristic Quality Index (FQI). The second set of measures are completed at specific plots along transects and provide relative frequency, relative dominance and importance values for species along the transect. The FQI success criteria should include species richness, mean conservatism, and FQI values equal to or exceeding those at the impact site. Scores should be stable or increasing in the two years prior to final acceptance of the mitigation site. (References for FQA include Taft, John B., Wilhelm, Ladd, and Masters. 1997. Floristic Quality Assessment for Vegetation in Illinois; A Method for Assessing Vegetation Integrity. Erigenia, Number 15, pp. 3-95 and Herman, K.D., Masters, Penskar, Reznicek, Wilhelm, and Brodowicz. 1996. Floristic Quality Assessment with Wetland Categories and Computer Application Programs for the State of Michigan. Michigan Department of Natural Resources, Wildlife Division, Natural Heritage Program, Lansing.)

3. Soil must support targeted vegetation.

4. Hydrology

All sites must, at a minimum, demonstrate sufficient evidence of wetland hydrology to meet the hydrology criteria of the Corps of Engineers Wetlands Delineation Manual (Technical Report Y-87-1 with electronic updates) for the delineation of wetlands. Wetland hydrology is to be demonstrated in "more years than not." This test must be passed and a site will not be accepted as successful if a period of dry years brings this into question. In addition,

appropriate hydrology to target habitats is to be demonstrated in more years than not.

a) Primary indicators of wetland hydrology include:

i. inundation

ii. saturation in upper 12 inches

iii. water marks

iv. drift marks

v. drift lines

vi. sediment deposits

vii. drainage patterns in wetlands

b) Secondary indicators (two or more required) of hydrology include:

i. oxidized root channels in upper 12 inches

ii. water-stained leaves

iii. local soil survey data

iv. FAC-Neutral test

v. Other (explain)

C. Exotic and undesirable species

Certain exotic and undesirable species must not be present in the mitigation site. Examples of such species include, but are not limited to, Garlic Mustard (*Alliara petiolata*), Panicled Aster (*Aster simplex*), Barnyard Grass (*Echinochloa crusgalli*), Purple Loosestrife (*Lythrum salicaria*), Eurasian Water Milfoil (*Myriophyllum spicatum*), Reed Canary Grass (*Phalaris arundinacea*), Common Reed (*Phragmites australis*), and Glossy Buckthorn (*Rhamnus frangula*). If an undesirable species is found within the mitigation site, it must be removed and a management plan must be created to prevent the re-introduction of the undesirable species.

D. Wetland Delineation

A wetland delineation, including a certified land survey of the boundary, must be submitted for Corps approval and verified by the Corps prior to release of the mitigation site. The acreage of the delineated area must be equal to or greater than required acreage (refer to the 1987 Corps of Engineers Wetland Delineation Manual Technical Report Y-87-1 with electronic updates).

APPENDIX A – REQUIRED INFORMATION

A. Text format notes for mitigation/monitoring proposals, as-built report and annual reports.

1. The report must include the Corps file number, the dates of the fieldwork and the monitoring year.

2. The report must include a distribution page listing names, titles, companies/agencies and addresses of all persons/agencies receiving a copy of the report.

3. Mitigation goals and objectives. Describe the functions lost at the impact site and the functions to be gained at the mitigation site. In addition describe the overall watershed improvements to be gained for this proposed project.

4. See Appendix C, Compensatory Mitigation Plan Checklist, for information required in the mitigation proposal.

B. List of figures to be submitted

1. Mitigation and monitoring proposal:

   a. Jurisdictional acres and proposed fill on *project* site (outlines and acreage indicated).

   b. Location and size of mitigation area

      i Road map/vicinity map
      ii U.S.G.S. quad map
      iii Site location map
      iv Reference measurements from a fixed point

   c. Jurisdictional areas and any proposed fill on *mitigation* site

   d. Mitigation site preparation

      i Plan view on base topographic map
      ii Representative cross-sections
      iii Planting plan
      iv Irrigation plan
      v Hydrological regime

vi Soil

e) Soil survey map and National Wetlands Inventory (NWI) map

2. As-built construction documents

a) Final site contours (grading plan)
b) Plantings as installed on grading plan

C. Figure format notes

1. All maps and plans submitted shall be legible and include title, date of preparation, date of submission and file number;

2. A legend shall be provided for all symbols, patterns, or screens that are used on the map or plan;

3. If colors are used to indicate areas on the original map, color copies shall be included in all copies of the report submitted to the Corps;

4. Indicate north arrow and provide a scale and datum;

5. Scale and orientation shall be identified and the same for all maps, except for detail sections;

6. Base topographic maps (i.e. for jurisdictional areas, location and size of mitigation areas, mitigation site preparation plans, planting plans, irrigation plans, and as-built report) shall be full size. (1 inch = 100 feet or less, 1 inch = 200 feet for very large projects); and

7. If the soil is brought in from off-site, note this location with a vicinity map and site location map. Conversely, note on vicinity and site maps where the soil is to be taken if offsite.

NOTE: Reduced copies of maps shall be included with all documents to facilitate review by advisory agencies. For Corps review, at least one set of a full-sized copy shall accompany mitigation and monitoring proposal, and one set shall accompany each annual report.

D. Legal Documentation

1. Certificate of title to mitigation site
2. Letter of Credit or Performance Bond
3. Conservation Easement or Deed Restriction
4. Land Use Plan and Management Agreement
5. Third Party Agreements, if applicable

APPENDIX B – DEFINITIONS

Adjacent – bordering, contiguous, or neighboring. Wetlands separated from other waters of the United States by man-made dikes or barriers, natural river berms, beach dunes and the like are "adjacent wetlands."

Corps of Engineers Wetlands Delineation Manual - Environmental Laboratory. (1987). Technical Report Y-87-1 with electronic updates, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS. Web site: http://www.wes.army.mil/el/wetlands/pdfs/wlman87.pdf

Creation – the construction and establishment of a self-sustaining wetland of native hydrophytic plant species, and associated native wildlife, where uplands had previously existed.

Delineation – the process of determining the limits of wetlands using the Corps manual. It documents the location and extent of the wetlands with the field data supporting the placement of its limits.

Diversity Index – a mathematical derivation that describes species diversity at a site.

Floristic Quality Assessment (FQA) – A method for evaluating the floristic integrity of sites, based on the number of species present and each species "mean conservatism," or likelihood to represent the indigenous nature of flora of a region.

Functions – The hydrological and biological characteristics of wetlands including: (1) habitat for fish, migratory birds and other wildlife, in particular at risk species; (2) protection and improvement of water quality; (3) attenuation of water flows due to flooding; (4) the recharge of ground water; (5) protection and enhancement of open space and aesthetic quality; (6) protection of flora and fauna; (7) sediment retention; and (8) nutrient export.

Growing season - The portion of the year when soil temperatures at 19.7 in. below the soil surface are higher than biologic zero (5 °C). For ease of determination this period can be approximated from climatological data given in most Soil Conservation Service (now called Natural Resources Conservation Service) county soil surveys (usually in Table 2 or 3 of modern soil surveys). The growing season starting and ending dates will generally be determined based on the 28 degree F or higher air temperature threshold at a frequency of 5 years in 10.

Hydric soil – soil that was formed under conditions of saturation, flooding or ponding long enough during the growing season to develop anaerobic conditions in the upper part. The concept of hydric soils includes soils developed under sufficiently wet conditions to support the growth and regeneration of hydrophytic vegetation. Soils that are sufficiently wet because of

artificial measures are included in the concept of *hydric soils*. Also, soils in which the hydrology has been artificially modified are hydric if the soil, in an unaltered state, was hydric. Some series, designated as hydric, have phases that are not hydric depending on water table, flooding, and ponding characteristics.

Hydrophytic vegetation - The sum total of macrophytic plant life growing in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content. When hydrophytic vegetation comprises a community where indicators of hydric soils and wetland hydrology also occur, the area has wetland vegetation.

Mitigation – includes avoiding, minimizing, rectifying, reducing, or compensation for resource losses. This guidance policy focuses on restoration and creation of self-sustaining wetlands.

Native – species known to be historically natural and present at the location and habitat prior to mans' introduction of species to the area from other geographic sources.

Non-native – also referred to as alien, exotic or invasive species, refers to organisms that are not native to the geographic location and habitat. There is no component of harmfulness included, although non-native species often are harmful to the native populations.

Performance Criteria – Observable or measurable attributes which are used to determine if a compensatory mitigation project meets its objective.

Restoration – means to re-establishing a setting or environment in which the natural functions of the pre-existing wetland recover.

Species evenness – the number of different plant species present at a site.

Species richness – a mathematical derivation that quantitatively describes the species diversity present on a sampling site.

Values – the social worth placed upon the wetlands functional characteristics, including: (1) habitat for migratory birds and other wildlife, in particular at risk species; (2) protection and improvement of water quality; (3) attenuation of water flows due to flooding; (4) the recharge of ground water; (5) protection and enhancement of open space and aesthetic quality; (6) protection of flora and fauna, which contributes to the Nation's natural heritage; and (7) contribution to educational and scientific scholarship.

Waters of the United States (definition is subject to modification) – include:

1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

2. All interstate waters including interstate wetlands;

3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:

i. Which are or could be used by interstate or foreign travelers for recreational or other purposes; or

ii. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or

iii. Which are used or could be used for industrial purpose by industries in interstate commerce;

4. All impoundments of waters otherwise defined as waters of the United States under the definition;

5. Tributaries of waters identified in paragraphs (a)(1)-(4) of this section;

6. The territorial seas;

7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a)(1)-(6) of this section.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 123.11(m) that also meet the criteria of this definition) are not waters of the United States.

Wetlands – means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

APPENDIX C

MULTI-AGENCY COMPENSATORY MITIGATION PLAN CHECKLIST[1]

Mitigation Goals and Objectives
- Describe functions lost at impact site
- Describe functions to be gained at mitigation site
- Describe overall watershed improvements to be gained

Baseline Information for Impact and Proposed Mitigation Sites
- Provide data on physical attributes of sites (soils, vegetation, hydrology)
- Describe historic and existing land uses and resources impacted
- Describe reference site attributes if available

Mitigation Site Selection and Justification
- Describe process of selecting proposed site
- Likelihood of success, future land use compatibility, etc.

Mitigation Work Plan
- Location
- Construction Plan
- Describe planned hydrology, vegetation, soils, buffers, etc.

Performance Standards
- Identify success criteria
- Compare functions lost and gained at impact and mitigation sites
- Describe soils, vegetation and hydrology parameter changes

Site Protection and Maintenance
- List parties and responsibilities
- Provide evidence of legal protective measures
- Maintenance plan and schedule

Monitoring Plan
- Provide monitoring schedule, identify party (ies) and responsibilities
- Specify data to be collected, including assessment tools and methodologies

Adaptive Management Plan
- Identify party (ies) and responsibilities
- Remedial measures (financial assurances, management plan, etc.)

Financial Assurances

- Identify party (ies) responsible for assurances
- Specify type of assurance, contents and schedule

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[1] Refer to “Supplement: Compensatory Mitigation Plan Checklist” for further explanation of specific checklist items.

APPENDIX D

SUPPLEMENT: COMPENSATORY MITIGATION PLAN CHECKLIST

This document is intended as a technical guide for Clean Water Act (CWA) Section 404 permit applicants[2] preparing compensatory mitigation plans. Compensatory mitigation is required to offset impacts that cannot be avoided and minimized to the extent practicable. The purpose of this document is to identify the types and extent of information that agency personnel need to assess the likelihood of success of a mitigation proposal. Success is generally defined as: a healthy sustainable wetland/water that – to the extent practicable – compensates for the lost functions of the impacted water in an appropriate landscape/watershed position. This checklist provides a basic framework that will improve predictability and consistency in the development of mitigation plans for permit applicants. Although every mitigation plan may not need to include each specific item, applicants should address as many as possible and indicate, when appropriate, why a particular item was not included (For example, permit applicants who will be using a mitigation bank would not be expected to include detailed information regarding the proposed mitigation bank site since that information is included in the bank's enabling instrument). This checklist can be adapted to account for specific environmental conditions in different regions of the U.S.

1. Mitigation Goals and Objectives

Impact Site

a. Describe and quantify the aquatic resource type and functions that will be impacted at the proposed impact site. Include temporary and permanent impacts to the aquatic environment.
b. Describe aquatic resource concerns in the watershed (e.g. flooding, water quality, habitat) and how the impact site contributes to overall watershed/regional functions. Identify watershed or other regional plans that describe aquatic resource objectives.

Mitigation Site

c. Describe and quantify the aquatic resource type and functions for which the mitigation project is intended to compensate.
d. Describe the contribution to overall watershed/regional functions that the mitigation site(s) is intended to provide.

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[2] The checklist may be used in other federal or state programs as well; however, additional information may be needed to satisfy specific program requirements. For example, Attachment A indicates additional information needed by the Natural Resources Conservation Service (NRCS) to satisfy the Swampbuster provisions of the Food Security Act.

2. Baseline Information - for proposed impact site, proposed mitigation site & if applicable,

proposed reference site(s).

a. Location

1. Coordinates (preferably using DGPS) & written location description (including block, lot, township, county, Hydrologic Unit Code (HUC) number, as appropriate and pertinent.

2. Maps (e.g., site map with delineation (verified by the Corps), map of vicinity, map identifying location within the watershed, NWI map, NRCS soils map, zoning or planning maps; indicate area of proposed fill on site map).

3. Aerial/Satellite photos.

b. Classification – Hydrogeomorphic as well as Cowardin classification, Rosgen stream type, NRCS classification, as appropriate.

c. Quantify wetland resources (acreage) or stream resources (linear feet) by type(s).

d. Assessment method(s) used to quantify impacts to aquatic resource functions (e.g., HGM, IBI, WRAP, etc.); explain findings. The same method should be used at both impact and mitigation sites.

e. Existing hydrology

1. Water budget. Include water source(s) (precipitation, surface runoff, groundwater, stream) and losses(s). Provide budgets for both wet and dry years.

2. Hydroperiod (seasonal depth, duration, and timing of inundation and/or saturation), percent open water.

3. Historical hydrology of mitigation site if different than present conditions

4. Contributing drainage area (acres).

5. Results of water quality analyses (e.g., data on surface water, groundwater, and tides for such attributes as pH, redox, nutrients, organic content, suspended matter, DO, heavy metals).

f. Existing vegetation

1. List of species on site, indicating dominants.

2. Species characteristics such as densities, general age and health, and native/nonnative/ invasive status.

3. Percent vegetative cover; community structure (canopy stratification).

4. Map showing location of plant communities.

g. Existing soils

1. Soil profile description (e.g., soil survey classification and series) and/or stream substrate (locate soil samples on site map).

2. Results of standard soils analyses, including percent organic matter, structure, texture, permeability.

h. Existing wildlife usage (indicate possible threatened and endangered species habitat).

i. Historic and current land use; note prior converted cropland.

j. Current owner(s)

k. Watershed context/surrounding land use.

1. Impairment status and impairment type (e.g., 303(d) list) of aquatic resources.

2. Description of watershed land uses (percent ag, forested, wetland, developed).

3. Size/Width of natural buffers (describe, show on map).

4. Description of landscape connectivity: proximity and connectivity of existing aquatic resources and natural upland areas (show on map).
5. Relative amount of aquatic resource area that the impact site represents for the watershed
and/or region (i.e., by individual type and overall resources).

3. Mitigation Site Selection & Justification

a. Site-specific objectives: Description of mitigation type(s) [3], acreage(s) and proposed compensation ratios.
b. Watershed/regional objectives: Description of how the mitigation project will compensate for the functions identified in the Mitigation Goals section 1(c).
c. Description of how the mitigation project will contribute to aquatic resource functions within the watershed or region (or sustain/protect existing watershed functions) identified in the Mitigation Goals section 1(d). How will the planned mitigation project contribute to landscape connectivity?
d. Likely future adjacent land uses and compatibility (show on map or aerial photo).
e. Description of site selection practicability in terms of cost, existing technology, and logistics.
f. If the proposed mitigation is off-site and/or out-of-kind, explain why on-site or in-kind options[4] are not practicable or environmentally preferable.
g. Existing and proposed mitigation site deed restrictions, easements and rights-of-way. Demonstrate how the existence of any such restriction will be addressed, particularly in the context of incompatible uses.
h. Explanation of how the design is sustainable and self-maintaining. Show by means of a water budget that there is sufficient water available to sustain long-term wetland or stream hydrology.
Provide evidence that a legally defensible, adequate and reliable source of water exists.
i. USFWS and/or NOAA Fisheries Listed Species Clearance Letter or Biological Opinion.
j. SHPO Cultural Resource Clearance Letter.

4. Mitigation Work Plan

a. Maps marking boundaries of proposed mitigation types; include DGPS coordinates.
b. Timing of mitigation: before, concurrent or after authorized impacts; if mitigation is not in advance or concurrent with impacts, explain why it is not practicable and describe other measures to compensate for the consequences of temporal losses.

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[3] That is, restoration, enhancement, creation or preservation: see Regulatory Guidance Letter (RGL) 02-2, Mitigation RGL, for definitions for these terms.

[4] See Federal Guidance on the Use of Off-Site and Out-of-Kind Compensatory Mitigation under Section 404 of the CWA.

c. Grading plan

1. Indicate existing and proposed elevations and slopes.

2. Describe plans for establishing appropriate microtopography. Reference wetland(s) can provide design templates.

d. Description of construction methods (e.g., equipment to be used)

e. Construction schedule (expected start and end dates of each construction phase, expected date for as-built plan).

f. Planned hydrology

1. Source of water.

2. Connection(s) to existing waters.

3. Hydroperiod (seasonal depth, duration, and timing of inundation and saturation), percent open water, water velocity.

4. Potential interaction with groundwater.

5. Existing monitoring data, if applicable; indicate location of monitoring wells and stream gauges on site map.

6. Stream or other open water geomorphic features (e.g., riffles, pools, bends, deflectors).

7. Structures requiring maintenance (show on map) Explain structure maintenance in section 6(c).

g. Planned vegetation

1. Native plant species composition (e.g., list of acceptable native hydrophytic vegetation).

2. Source of native plant species (e.g. salvaged from impact site, local source, seed bank) stock type (bare root, potted, seed) and plant age(s)/size(s).

3. Plant zonation/location map (refer to grading plan to ensure plants will have an acceptable hydrological environment).

4. Plant spatial structure – quantities/densities, % cover, community structure (e.g., canopy stratification).

5. Expected natural regeneration from existing seed bank, plantings, and natural recruitment.

h. Planned soils

1. Soil profile

2. Source of soils (e.g., existing soil, imported impact site hydric soil), target soil characteristics (organic content, structure, texture, permeability), soil amendments (e.g., organic material or topsoil).

3. Erosion and soil compaction control measures.

i. Planned habitat features (identify large woody debris, rock mounds, etc. on map).

j. Planned buffer (identify on map).

1. Evaluation of the buffer's expected contribution to aquatic resource functions.

1. Physical characteristics (location, dimensions, native plant composition, spatial and vertical structure.

k. Other planned features, such as interpretive signs, trails, fence(s), etc.

5. Performance Standards

a. Identify clear, precise, quantifiable parameters that can be used to evaluate the status of desired functions. These may include hydrological, vegetative, faunal and soil measures. (e.g., plant richness, percent exotic/invasive species, water inundation/saturation levels). Describe how performance standards will be used to verify that objectives identified in 3(b) and 3(c) have been attained.

b. Set target values or ranges for the parameters identified. Ideally, these targets should be set to mimic the trends and eventually approximate the values of a reference wetland(s).

6. Site Protection and Maintenance

a. Long-term legal protection instrument (e.g. conservation easement, deed restriction, transfer of title).

b. Party(ies) responsible and their role (e.g. site owner, easement owner, maintenance implementation). If more than one party, identify primary party.

c. Maintenance plan and schedule (e.g. measures to control predation/grazing of mitigation plantings, temporary irrigation for plant establishment, replacement planting, structure maintenance/repair, etc.).

d. Invasive species control plan (plant and animal).

7. Monitoring Plan

a. Party(ies) responsible for monitoring. If more than one, identify primary party.

b. Data to be collected and reported, how often and for what duration (identify proposed monitoring stations, including transect locations on map).

c. Assessment tools and/or methods to be used for data collection monitoring the progress towards attainment of performance standard targets.

d. Format for reporting monitoring data and assessing mitigation status.

Monitoring schedule

8. Adaptive Management Plan

a. Party(ies) responsible for adaptive management.

b. Identification of potential challenges (e.g., flooding, drought, invasive species, seriously degraded site, extensively developed landscape) that pose a risk to project success. Discuss how the design accommodates these challenges.

c. Discussion of potential remedial measures in the event mitigation does not meet performance standards in a timely manner.

d. Description of procedures to allow for modifications of performance standards if mitigation projects are meeting mitigation goals, but in unanticipated ways.

9. Financial Assurances

a. For each of the following, identify party(ies) responsible to establish and manage the financial assurance, the specific type of financial instrument, the method used to estimate assurance amount, the date of establishment, and the release and forfeiture conditions:

1. Construction phase
2. Maintenance
3. Monitoring
4. Remedial measures
5. Project success

b. Types of assurances (e.g., performance bonds, irrevocable trusts, escrow accounts, casualty insurance, letters of credit, etc.).

c. Schedule by which financial assurance will be reviewed and adjusted to reflect current economic factors.

APPENDIX E
NATURAL RESOURCES CONSERVATION SERVICE (NRCS) PROGRAM REQUIREMENTS[5]

- NRCS conservation practice standards and specifications

- NRCS Environmental Evaluation

- Mitigation agreement

- Federal/State/Local required permits

- Compatible use statement:
    - Allowable uses (e.g. hunting, fishing)
    - Prohibited uses (e.g. grazing, silviculture)
    - Uses approved by compatible use permit

- Copy of recorded easement

- Subordination waiver on any existing liens on mitigation site

- Statement of landowner's tax liability

- Copy of Warrantee Deed from landowner's attorney (no encumbrances, if so list)

- Copy of certified wetland determination:
    - NRCS-CPA-026 Highly Erodible Land and Wetland Conservation
    - Certification
    - Wetland label map

- Copy of FSA Good Faith Waiver

- Copy of easement(s) ingress/egress granted to USDA employees for gaining legal access to mitigation site

- Copy of NRCS-CPA-38 Request for Certified Wetland Determination/Delineation

[5] For a complete list of the program requirements needed by NRCS to satisfy the Swampbuster provisions of the Food Security Act see the National Food Security Act Manual.